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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,803	06/29/2001	Simo Maenpaa	TU1.P29	3378

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SEATTLE, WA 98104

EXAMINER
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CROW, STEPHEN R

ART UNIT	PAPER NUMBER
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3764

MAIL DATE	DELIVERY MODE
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05/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

09/894,803

Applicant(s)

MAENPAA, SIMO

Examiner

Steve R. Crow

Art Unit

3764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3-5, 10, 12, 13, 15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-5, 10, 12, 13, 15, 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:  
  
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
  
2. Claims 3-5,10,12-13,15,17-19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.
  
3. It remains unclear how the specific structure of Polar heart rate receiver can determine the intensity of the signal. The applicant has presented a hypothetical use of such a receiver. What structure has been added to the receiver to permit it to recognize different signal strengths? The evidence submitted by applicant (Declaration of Simo Maenpaa) has

Art Unit: 3764

been considered and does discuss electromagnetic field intensity theory, but the examiner contends that one skilled in the art, given applicant's disclosure, would not be able to produce the invention as claimed.

It is unclear as to how the modification circuitry 33 and microprocessor 34 are able to modify a heart rate monitor such as a Polar monitor to measure variations in the field strengths.

1. Claims 3-5, 10, 12-13, 15, 17-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Specification refers to field of signal processing wherein signals are amplified, filtered and converted. These are all concepts in the fields of electronic devices and circuits; however, applicant does not provide structural recitations of amplifiers, filters, and signal modifiers in the Specification.

*Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 3,10,12,15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite "adjusting the endless belt", but fail to recite any physical parameter of the endless belt is being adjusted; e.g., the speed or inclination of the belt.

The examiner has reviewed Applicant's remarks. It is still unclear as to how the heart rate monitors employ structure to determine the distance

Art Unit: 3764

between the transmitter and the receiver. Giving a charitable interpretation that the strength data can be used to determine the distance between the Polar type heart rate monitor transmitters and receivers, the following actions are applied:

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3764

4. Claims 3-5,10,12-13,15,17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurt (5921893) in view of Friedman (wo 98/36400.).

Hurt discloses in paragraph 50: "(50) According to the presently most preferred embodiment of the invention, it includes a heart rate monitor operatively connected to the control panel. For example, a wireless heart rate monitor can be used, which communicates via radio signals with the receiver 57. The purpose of the heart rate monitor is to help the person using the exercise treadmill 10 to maintain his or her heart rate within a desired range. For example, target heart rates based on general factors such as age and weight can be used to increase the benefits of the cardiovascular exercise without unduly stressing a persons system. In response to signals from the heart rate monitor, the computer controller of the apparatus 10 can be designed or programmed to automatically adjust the speed and/or the incline of the treadmill assembly 14 to increase or reduce the intensity of the exercise, thereby serving as a biofeedback device.

Friedman discloses on page 15 that sensor 70 may be implemented using a range of different technologies known for proximity sensors" and

Art Unit: 3764

goes on to state the use of a transmitter for transmitting an electromagnetic signal.

Applicant's own Disclosure suggests that "On the basis of this strength data it is possible to define the distance between the transmitter and the receiver in a known manner", as applied to Polar type heart rate monitors.

Given these teachings, it would have been obvious to one skilled in the art to utilize electromagnetic sensors to sense the discrete positions of the user on a Hurt type treadmill in the manner performed and taught by Applicant's own disclosure and the Friedman teaching for user safety and athletic training purposes.

I. Claims 3-5,10,12-13,15,17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huish et al or Trulaske et al. in view of Shyu.

Huish et al or Trulaske et al each show all of applicant's claimed structure, wherein a user has a Polar type heart rate monitor which transmits data to a microprocessor on the treadmill having control means



Art Unit: 3764

which adjusts the speed and inclination of the treadmill in response to the signal.

Huish et al or Trulaske et al utilize an electromagnetic sensor which broadly senses the position of the user on a treadmill as stated in the previous paragraph. Shyu teaches the use of electronic sensors for determining the position of the user on a treadmill.

Applicant's own Disclosure suggests that "On the basis of this strength data it is possible to define the distance between the transmitter and the receiver in a known manner", as applied to Polar type heart rate monitors.

Given these teachings, it would have been obvious to one skilled in the art to utilize electromagnetic sensors to sense the discrete positions of the user on a treadmill in the manner performed and taught by the Shyu controller for user safety purposes.

As to claim 10, the examiner takes Official Notice that microprocessors generally include amplifiers, filters, and signal modifiers; and therefore, that Huish and Trulaske would inherently possess such microprocessor elements.

5. Claims 3-5,10,12-13,15,17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potash et al in view of Huish et al or Trulaske. Potash et al discloses an adaptive treadmill having an ultrasonic range finder located on the treadmill and for sensing the location of the user on the treadmill to respond in an appropriate manner to change the speed and/or slope.

Huish et al and Trulaske each teach the use of a transmitter which transmits a signal to a receiver located on the treadmill which then uses a controller to control and operate the treadmill belt speed and inclinations.

Applicant's own Disclosure suggests that "On the basis of this strength data it is possible to define the distance between the transmitter and the receiver in a known manner", as applied to Polar type heart rate monitors.

Given these teachings, it would have been obvious to one skilled in the art to modify the Potash et al treadmill by substituting an electromagnetic signal generating/receiving means for the ultrasonic

Art Unit: 3764

range finder as an equivalent means for sending and receiving user position data for user safety purposes.

As to claim 10, the examiner takes Official Notice that microprocessors generally include amplifiers, filters, and signal modifiers; and therefore, that if not inherent in Potash, Huish and Trulaske, it would have been obvious to utilize such microprocessor elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve R. Crow whose telephone number is 571-272-4973. The examiner can normally be reached on Reg: 8:30-6; Off First Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cary O'Connor can be reached on 571-272-4715. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**Stephen R. Crow**  
**Primary Examiner**

SC